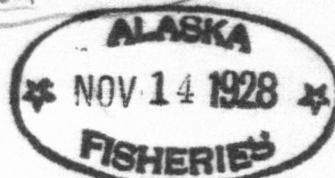


*Annual Report on Bristol Bay in 1928
By Dennis Loring*

DEPARTMENT OF COMMERCE
BUREAU OF FISHERIES



WLB
Seattle, Washington
November 5, 1928

Subject: Operations Bristol Bay, Season 1928.

Commissioner of Fisheries,
Washington, D. C.

There follows herewith a summary of Bureau and commercial fishery activities in Bristol Bay for the season of 1928:

The Bureau activities were along the lines of previous years with the exception that no predatory work was attempted due to the short seasonal period possible for operations of this character.

The completion of the new Bureau boat "Crane" made it possible to transport fifteen employees to Bristol Bay together with seasonal supplies and small items of equipment, and eleven men on return trip to Seattle. The "Victoria" transported twelve men from Seattle to Bristol Bay and ten men on return to Seattle at the end of the season. Two men were transported north on the "Hyades" of the Red Salmon Canning Company and one man on the "Bering" of the Alaska Packers from San Francisco. Two men went north on the "Otsego" of Libby, McNeill and Libby Company from Seattle and one man on the "North King" of the Alaska Portland Packers Association from Portland.

The Bureau's patrol boat "Scoter" was ordered to Seattle for necessary repairs and eight men were detailed to this boat for operating crew on trip south.

Due to loss of material for intended use in our operations, by the wreck of the Alaska Packers Association ship "Star of Faulkland," it was necessary to dispense with the services of four men, two receiving employment in canneries and two returned to the states on regular transportation boat.

The writer proceeded north on the "North King" leaving Portland May 10, arriving Naknek May 17, and went ashore with the first landing party on that date. Work on the marine ways and Bureau launches occupied our time and on the arrival of the "Crane" May 22

a tent camp was established at the "ways." All our employees arrived within the next few days and were camped at the "ways." Considerable necessary work of rebuilding and repairing the marine ways was accomplished and a small crew were detailed for this work through the season. Through the kindness of the Alaska Packers at Kogging, we were enabled to secure by dismantling several tent house frames at Carlisle which were transported to and erected at the "ways" for future use. This will facilitate operations on arrival another year. It was necessary to rebuild a considerable portion of the marine ways and add an addition of about forty feet. Excavation was necessary to move back the house scow toward the high bank about five feet in order to have sufficient room for hauling our boats on and off the ways.

Late in May we learned the "Star of Faulkland" was wrecked on the rocks off Akun Island; Unimak Pass, and that in consequence all our oils for vessel operation and lumber for counting weirs, etc., were a total loss, also found the wire forwarded for the weir at Kvichak on inspection to be unsuited for weir purposes as the mesh was sufficiently large to gill salmon. Therefore, the weir program, with the exception of Ugashik River, was of necessity abandoned for the season. The Alaska Packers Association, who owned the "Faulkland" had contracted to supply the oils and lumber, advised they could not supply the lumber this season, but the oils would be immediately forth-coming from Bellingham via Pacific American Fisheries boat. This oil was received before the commercial season opened and on account of the Portland Packers at Naknek supplying us with needed oils up to that time, the Bureau repaying them on receipt of their supply, it was no serious handicap to our activities.

During the season, Dr. Willis H. Rich, Chief Investigator, Salmon Fisheries, visited all important fishing localities in Bristol Bay in company with the writer on the Bureau's patrol boat "Scoter" and various river launches in order to get a comprehensive picture of activities in that district.

Two representatives of the Alaska Fishermen's Union accompanied our force to perform such labor as assigned to them and primarily to check up on counting weir activities. Due to the loss of our material by the wreck of the "Star of Faulkland" and our weir program being thereby eliminated, but one man could be detailed at this work and was held for the season. The other man refused other work and was returned to the states. The man we held, while a good

worker, was not familiar with fish or fishing and am, therefore, not in favor of having the Union identified with our work in the future. However, we are always open to inspection so they can take any action they choose independently.

Runs and Escapement of Salmon

The runs of salmon over the entire Bristol Bay District as a whole with the exception of Ugashik was the most satisfactory occurring for the past several years. Heretofore one side of the bay would harbor a good run and the opposite side a poor or mediocre run, but during the current year the run was heavy and consistent with the exception mentioned.

On Monday, July 2, the main red salmon run started into the Nushagak River and the fishermen fartherest out made good catches while those farther up the bay caught very few. The following morning, July 3, the heavy run had passed well up the river and every fishing boat was taking all they could handle. The canneries were practically blocked with fish and heavy shipping was necessary to other canneries across Bristol Bay and during this week about 500,000 red salmon were transported away from Nushagak. It was felt by the writer that such heavy transportation was dangerous and so reported, but the run continued heavy and especially so over the weekly closed period, which assured us of a good escapement. The run continued heavy with intermittent slack periods of short duration throughout the season. The escapements were watched closely and were unbelievably heavy over the weekly closed periods.

During the period from July 9 to July 14 inclusive all canneries were on limit more or less of the time. Fishermen at times were using only a small part of their web to secure a boat load and the stake nets were loaded after each flood.

Many of the cannerymen had all available cans filled and discontinued fishing July 16 to 18. The run slackened perceptibly the 18 and from that date to end of the season continued light. On the Kvichak side of the bay the first salmon made their appearance far out in the bay July 3 and a little activity was noticed near the mouth of Naknek River July 5, but small and spotted catches were the order in Kvichak Bay and no appreciable takes were made until the fish reached about abreast of the Bristol Bay Packing Company en route to Kvichak River July 7, when

an exceptionally heavy run appeared and all canneries received a liberal supply. While attempts were made by fishermen to gill net in the vicinity of the ship's anchorage it met with failure owing to the clear water and no catches of importance was reported until the fish arrived in murky water. The run continued heavy over the weekly closed period and the heavy run was practically exhausted the following Monday afternoon. The fish held well off shore from Naknek and practically all the ascending salmon passed by Naknek River and entered the Kvichak. The run was mediocre to slack in this area until the afternoon tide on July 12, when an extremely heavy run set in and continued over the weekly closed period to the following Wednesday, July 18, after which they tapered off to small numbers at the season's close. The escapement into Naknek River was never large, but during most of the season there was little or no fishing close to the river mouth and some escapement was occurring on every flood. There was a fair escapement near the close of the commercial season and for a few days thereafter and later observations on the lake showed a fair final escapement.

The run in the vicinity of and escapement into Egegik River was at all times consistent and adequate but never extreme. From the beginning of the season red salmon entering showed a steady increase and on July 6, good numbers entered the river and were running heavy for this district. Reds were a good average size. The extreme heavy storm toward the end of the season prevented any extensive fishing during which period a heavy escapement passed up the river and very few fish were taken after the 20.

Mr. Clarence Olson, who was in charge of this field during the season and William Sullivan, an experienced hatchery man, made a trip to Becharof Lake to inspect the spawning grounds after the commercial season closed, and to transfer some Bureau equipment from the head of the lake to Egegik and have the following to say regarding their observations on the trip:

"We departed from Egegik July 27 and reached the rapids the same evening where we camped for the night. Heavy wind and rain storm held us storm bound until August 1, when storm subsided sufficiently to permit passage up the lake. En route to the lake several good schools of red salmon were noted ascending the river. On arrival at the head of the lake Mr. Frank Stevens permitted the use of his cabin "Blue Goose Road House" for Bureau men while in the district free of

charge which gave us comfortable quarters and facilitated our work in that locality.

All streams in the vicinity were viewed on arrival, but while good schools were noted at the stream mouths they had not as yet begun to ascend in any numbers. Local natives advised that the salmon only reached here July 20, which was considerably later than usual. On August 15 the salmon began appearing in heavy schools around the spawning streams. While returning along shore from a trip of investigation from Chief Creek a steady stream of reds were moving along the lake shore, about 50 feet off shore, averaging twelve feet wide and two hours later or at dark they were still passing up lake, presumably headed for Chief Creek. As it was necessary to be at Egegik by August 20, we were compelled to break camp the 17. Great schools of reds were observed at various points in the lake and in the narrows between Big and Little Becharof Lakes.

While the salmon were late in ascending the lake and covering the spawning grounds we saw sufficient salmon to be assured in our judgment of an adequate escapement. In fact it was a tremendous escapement."

Ugashik was the only locality where we feel there was an insufficient escapement and the weir count records show a serious falling off within the last three years from 787,000 escapement in 1926, to 443,262 in 1927, and 202,966 reds the current year. The season was unfavorable as to weather conditions and several days were lost by the fishermen. In addition to the above, the spawning areas in the Kvichak area were viewed by the writer with conditions most favorable, a separate report being submitted to the Commissioner.

An observer was detailed to Wood River Lakes and a partial report received which indicates a heavy escapement into this district. An observer was also dispatched to Naknek Lake, but no report is yet available due to poor mail facilities. From personal observations in the lower river, I feel there is a fair escapement but not heavy.

Taken as a whole we consider the commercial catch and the escapement most satisfactory, the salmon pack for the season as preliminarily reported representing:

1,308,286	cases	Red Salmon	
15,354	"	"	tails
12,432	"	Kings	
37,566	"	Chums	
328	"	Cohoos	
108	"	Pinks	
<hr/>			
1,374,164	"	Total (1# cans)	

Resident Fishermen

Gill Net Boats:

The past season shows a decided increase in the number of independent fishermen in the various areas of Bristol Bay, mainly native boats furnished by the canners. During the current year our records show an increase of about 73% over the season of 1927. The natives live in that country and we feel should be entitled to every consideration possible. However, these independent boats increase the total number of boats in the district by about one boat per line. During the season of 1927 the total number of independent boats fishing were ~~63~~ ⁶⁴ comprising of 28 boats operated by white residents and 35 boats operated by natives.

The total number of independent boats the current year totaled 118 comprising of 30 boats operated by white residents and 88 boats operated by natives.

Boats were apportioned as follows:

1928		1927
Nushagak	51	14
Kvichak	26	21
Naknek	11	6
Egegik	16	9
Ugashik	14	13
	<u>118</u>	<u>63</u>

Commercial Stake Nets:

	1928	1927
Nushagak	92	53
Igushik	2	4
Egegik	5	6
Ugashik	2	1
Kvichak	<u>3</u>	<u>3</u>
	104	67

The increase of this class of gear is about 55%.

Recommendations

The only recommendation the writer has to offer at this time is the change of regulation Number 13 relative to the 60 hour line from Graveyard Point to a point between Squaw Creek and Russian Finn Creek. This line now extends on an angle of a mile or more up stream from one shore to the other and it is difficult for fishermen to be sure as to whether or not they are over the line unless they may be drifting near shore. I would recommend, therefore, that this line extend across the bay from a point at Jensen Creek to the opposite shore at right angles across the bay. This is not a penalty and simply evens matters as they gain in fishing area on one shore what they lose on the opposite shore, but it assists materially for regulatory purposes.

New Fishery Regulations

The only new regulations for the season was the shortening of gill nets carried in fishing boats from 200 fathoms in length to 150 fathoms in Nushagak area. Before the opening of the season much unfavorable comment was made by the fishermen claiming that this length of net was inefficient and impossible on the flats at Nushagak, but in actual operation their claims were proved in error and it was demonstrated that where there is a favorable run, 150 fathoms is sufficient for all practical uses.

To eliminate the practices of previous years of fishermen from one area invading other areas, the Department, the current year, segregated the areas leaving a considerable closed interval between area prohibitive markers. This plan met with the general favor of the majority of canners and fishermen (and eliminated all criticism on this phase.) The observance was commendable.

As considerable extension was planned in the matter of stake netting in the Nushagak area primarily by parties outside the area, it was felt necessary to curtail the possibilities in this line without penalizing the local people previously established. Additional closed areas for this class of gear became necessary and regulation accordingly promulgated before the opening of the commercial red salmon season. A new saltery was to be established at Coffee Point to operate exclusively on stake net fish, but plans were discontinued when new regulation was made effective.

Gear and its Efficiency

At the beginning of the season considerable dissatisfaction was expressed by the fishermen as to the size of regulation mesh of $5\frac{1}{2}$ inches used in their operations claiming the fish were so small and mesh of nets so large that the fish passed through and impossible to gill. This was true in the early part of the season in the Kvichak-Naknek area, but feel the inability to make good catches at that time was partly due to the clear condition of the water in vicinity of the ship's anchorage. There was very little comment on this phase later when the fish reached murky water and good catches resulted.

During the season experimentation was made with various sizes of gill net mesh and on analyzing these reports we feel that the gear now in use, that is $5\frac{1}{2}$ inches, is the most suitable for all purposes and as the records show, this size of mesh takes about an even number of males and females. Nets of 5 inches and $6\frac{1}{2}$ inch mesh were used by commercial fishermen. The reports indicate that the 5 inch mesh net delivered larger catches of red salmon than the 6 inch mesh or $5\frac{1}{2}$ inch regulation mesh with a much larger percentage of females than males and relatively few kings or chums. The 6 inch mesh net caught fish of better than average length and weight, and about 76% males, and a more varied variety of salmon as to specie and size than the other sizes of gear.

Nets of 4 inch mesh and $4\frac{1}{2}$ inch mesh were also fished in the hope of securing a reasonable number of pink salmon by smaller mesh nets than now permitted by the regulations. The reports would indicate these nets caught only small red salmon with very few of any other specie and their catches of red salmon were considerably less than the regulation mesh. Very few pink salmon were taken during the period these small mesh nets were fished.

Patrol

The various patrols were established in sufficient time before the opening of the commercial season to permit the re-erecting and repairing of various stream markers and the establishing of new ones.

No violations of sufficient importance to prosecute was reported or observed throughout the season. The agreement relative to towing empty boats to the fishing grounds were generally observed. Launches for patrol were used in Kvichak, Naknek, Ugashik, Nushagak and Igushik areas. A dory and outboard motor were used at Egegik with charter of a local launch over the weekly closed period whenever it was possible.

While the patrol was very effective throughout the season we attribute it in part to the co-operative spirit shown by the packers and the fishermen as a whole over the district.

Predatory Work

No work of consequence has been accomplished in the extermination of predatory enemies of salmon for the past two years with the exception of tern of which considerable numbers were shot each season.

Our investigations the past season into the various rivers and lakes have convinced us of the return of Dolly Vardens and other predatory trout species in alarming numbers which we feel, if not checked, will threaten the future productiveness of the different Bristol Bay areas. Trips to Aleknagik Lake indicated that the Dolly Vardens were nearly as numerous and as active as in former years when the cannery and the Bureau began their co-operative work of extermination.

As the main body of these trout are migratory a continuous plan of elimination becomes necessary. In Naknek River when the red salmon fingerlings were passing down stream there were certain points of passage where the water appeared boiling from trout feeding on the outgoing salmon migrators. In accordance with the Bureau's agreement with the cannerymen when taking over the small launches secured by the Bristol Bay salmon packers for Bureau use, a reward of .05¢ each was offered for every Dolly Varden, lake trout or pike taken in Bristol Bay district. Rewards were paid on a total of 38,894 trout, mainly Dolly Vardens, at .05¢ each, amounting to \$1,944.70. This was a less amount than we anticipated, but the natives and locals claimed they did not believe they would receive pay for trout but assured us that another year they would make special efforts. In many cases where collectors were careless the dogs destroyed several thousand tails.

In order to safeguard this phase of the work and stimulate local activities, it is felt that the proper manner of handling would be for the Bureau to assign five men to give their entire time to this work except when detailed for patrol duty during the commercial season. They would be assigned one each to Nushagak, Iliamna, Naknek, Egegik and Ugashik and make their homes in their respective districts. A reward should be offered of about .05¢ each for predatory fish tails, as formerly, and it would be the duty of these men to keep a close check of the predatory fish taken and payments for same would be made only upon their endorsement. They would be expected to perform whatever labor possible on the extermination of predatory enemies of salmon aside from and not counted with the activities of locals and natives and for which no reward would be paid. While the natives and locals will catch and utilize a certain number of trout each season for home use we feel that the offering of a reward will stimulate this class of fishing and will have the advantage of utilizing all the trout taken for food. The cost of this work would be as follows:

5 Bureau men including expenses	\$11,244.00	per year
Estimated expenditure for trout tails	<u>10,000.00</u>	" "
	\$21,244.00	" "

As the Bureau's finances are not sufficient to handle this entire expenditure/each year we hope that negotiations can be concluded with the Bristol Bay Packers to the end that this Bureau will be responsible for the first item of \$11,244.00 and the packers would assess themselves to the amount of the second item of \$10,000.00-- to pay the reward offered for trout tails. If this becomes possible

we would suggest that a representative of the Bristol Bay Packers, who visits Bristol Bay each season, be authorized to handle this latter account and make payments only on vouchers endorsed by the Bureau's representative assigned to the respective district where the special operations originate. If considered necessary, the Bureau representative will produce the evidence to the packers representative in every case where payments are to be made. This co-operative suggestion is made only as a possibility after this Bureau expends the full amount of \$10,000.00 for predatory work in accordance with its agreement when taking over the various small patrol launches from the Bristol Bay Packers, and, also, in case this amount as stated is over-run by unexpected local activities we would like to feel that the cannery would absorb the surplus for which we have no funds. In this way we would encourage and not be compelled to caution or curtail the work of local operators along this line.

We feel that the weir program will assist materially in this work but work as outlined above we feel should be undertaken immediately.

Respectfully submitted,

Dennis Linn
Agent

DW:ML

BOATS FISHED BRISTOL BAY

Season 1928

District & Co.	Quota Boats		Independent		Over Quota
<u>Nushagak</u>	Agreed	Fished	White	Native	Increase
Columbia River Pkrs.	24	24		9	37.5%
Northwestern Fisheries	24	24		7	29+%
L.McN.&L.(a) Nushagak	24	30) 4	7%
(b) McN	24	24)	
(c) Ignshik(Saltery)	8) 2	
Alaska Port.Pkrs. Assn.	36	36	1	3	11%
Alaska Pkrs. Assn.					
(a) Clark Point	40	57	1	6)	
(b) Scandinavian	32	20)	9+%
(c) Ignshik(Saltery)	5)	
Alaska Salmon Co.	24	29	3	15	62%
(a) Fished Naket					
Saltery	5				
	<u>246</u>	<u>244</u>	<u>5</u>	<u>46</u>	<u>20%</u>
<u>Kvichak</u>					
L.McN.&L.(a) Lockhonak	32	25)	
(b) Libbys Koggiung	40	45	1)	5%
(c) Libbyville	32	34	4)	
Alaska Pkrs. Assn.					
(a) Koggiung	40	51		3)	
(b) Coffee Creek	40	49)	3%
(c) Carlisle boats	20)	
Bristol Bay Pkg. Co.	80	80			
Alaska Salmon Co.					
(Native) (a) Graveyard Ck.					
Saltery				4	Natives
(b) Bering Sea Pkg. Co.				4	"
Nakat Pkg. Corp.	24	32	6	2)	25%
(a) Fished boats of)	
Westward Pkg.Co.	7				
Independent Saltery Koggiung			<u>2</u>	<u>13</u>	<u>Locals</u>
	<u>315</u>	<u>316</u>	<u>13</u>	<u>13</u>	<u>8+%</u>

BOATS FISHED BRISTOL BAY

Season 1928

District & Co.	Quota Boats		Independent		Over Quota
	Agreed	Fished	White	Native	Increase
<u>Naknek</u>					
Alaska Port.Pkrs. Assn.	32	32	2		6%
Alaska Pkrs. Assn (NN)	40	52			
(a) (O)	40	40			
(b) (M)	40	40			
(c) Carlisle boats	12				
Northwestern Fisheries	32	32	3	3	19%
Red Salmon Co. (a) (B)	32	32	2		6%
(b) (P)	<u>32</u>	<u>32</u>	<u>1</u>	<u>1</u>	<u>3%</u>
	260	260	7	4	4+
<u>Egegik</u>					
Alaska Pkrs. Assn.	24	24	1	4	21%
L.McN.&L.	<u>24</u>	<u>24</u>	<u>2</u>	<u>9</u>	<u>46%</u>
	48	48	3	13	33%
<u>Ugashik</u>					
Alaska Pkrs. Assn.	16	16		4	25% Boats owned
International Pkg. Co.	12	12	2	6*	66+%(by fishermen)
Red Salmon Co.	<u>16</u>	<u>16</u>	<u>2</u>	<u>2</u>	<u>12.5%</u>
	44	44	2	12	35%
Totals	913	912	30	88	13-

*Two boats manned each by 1 white man and 1 native,
one of these boats was father and stepson.
(Boats property of fishermen)

Total independent boats 118.

About 13-% increase on account of independent and native
boats or about 9 boats instead of 8 boats per line.